

ABSTRACT OF THE DISCLOSURE

An immunogenic or vaccine composition to induce an immune response or protective immune response against West Nile virus (WNV) in an animal susceptible to WNV. The composition includes a pharmaceutically or veterinarily acceptable vehicle or excipient, and a vector. The vector contains heterologous nucleic acid molecule(s), expresses *in vivo* in the animal WNV antigen, immunogen or epitope thereof, e.g., WNV E; WNV prM and E; WNV M and E; WNV prM, WNV M and E, WNV polyprotein prM-E, WNV polyprotein M-E, or WNV polyprotein prM-M-E. The composition can contain an adjuvant, such as carbomer. Methods for making and using such a composition, including prime-boost regimes and including as to differential diagnosis, are also contemplated.